Proposed Maximum Residue Limit PMRL2014-91

Clethodim

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Under the authority of the *Pest Control Products Act*, Health Canada's Pest Management Regulatory Agency (PMRA) has concluded that the addition of new uses on carrots, radish, parsnip and garden beets to the product labels of Centurion EC Herbicide and Select EC Herbicide, containing technical grade clethodim, is acceptable. The specific uses approved in Canada are detailed on the label of Centurion EC Herbicide and Select EC Herbicide, *Pest Control Products Act* Registration Numbers 27598 and 22625, respectively.

The evaluation of these clethodim applications indicated that the end-use products have merit and value, and the human health and environmental risks associated with the new uses are acceptable.

Before registering a pesticide for food use in Canada, the PMRA must determine the quantity of residues that are likely to remain in or on the food when the pesticide is used according to label directions and that such residues will not be a concern to human health. This quantity is then legally specified as a maximum residue limit (MRL). An MRL applies to the identified raw agricultural food commodity as well as to any processed food product that contains it, except where separate MRLs are specified for the raw agricultural commodity and a processed product made from it.

Consultation on the proposed MRLs for clethodim is being conducted via this document (see Next Steps, the last section of this document). A summary of the field trial data used to support the proposed MRLs can be found in Appendix I.

To comply with Canada's international trade obligations, consultation on the proposed MRLs is also being conducted internationally by notifying the World Trade Organization, as coordinated by the Standards Council of Canada.

The proposed MRLs, to be added to the MRLs already established for clethodim, are as follows.

Table 1 Proposed Maximum Residue Limits for Clethodim

Common Name	Residue Definition	MRL (ppm)[1]	Food Commodity
Clethodim	2-[1-[[[(2*E*)-3-chloro-2-propen-1-yl]oxy]imino]propyl]-5-[2-(ethylthio)propyl]-3-hydroxy-2-cyclohexen-1-one, including metabolites containing the 2-cyclohex-1-enone moiety	0.3	Crop subgroup 1B (Root Vegetable except Sugarbeet)
		0.2	Eggs, meat and meat byproducts of cattle, poultry, hogs, goats, horses and sheep
		0.09	Radish tops, garden beet tops
		0.05	Milk

[1] ppm = parts per million

MRLs are proposed for each commodity included in the listed crop groupings in accordance with the Residue Chemistry Crop Groups webpage in the Pesticides and Pest Management section of Health Canada's website.

MRLs established in Canada may be found using the Maximum Residue Limit Database on the Maximum Residue Limits for Pesticides webpage. The database allows users to search for established MRLs, regulated under the *Pest Control Products Act*, both for pesticides or for food commodities.

International Situation and Trade Implications

MRLs may vary from one country to another for a number of reasons, including differences in pesticide use patterns and the locations of the field crop trials used to generate residue chemistry data. For livestock commodities, differences in MRLs can also be due to different livestock feed items and practices.

Table 2 compares the MRLs proposed for clethodim in Canada with corresponding American tolerances and Codex MRLs.[1] American tolerances are listed in the Electronic Code of Federal Regulations, 40 CFR Part 180, by pesticide. A listing of established Codex MRLs is available on the Codex Alimentarius Pesticide Residues in Food website, by pesticide or commodity.

Table 2 Comparison of Canadian MRLs, American Tolerances and Codex MRLs (where different)

Food Commodity	Canadian MRL (ppm)	American Tolerance (ppm)	Codex MRL (ppm)
Crop Subgroup 1B (Root Vegetable except sugarbeet)	0.3	1.0	Not Established
Radish tops	0.09	0.7	Not Established
Garden beet tops	0.09	Not established	Not established
Eggs	0.2	0.2	0.05

[1] The Codex Alimentarius Commission is an international organization under the auspices of the United Nations that develops international food standards, including MRLs.

Next Steps

The PMRA invites the public to submit written comments on the proposed MRLs for clethodim up to 75 days from the date of publication of this document. Please forward your comments to Publications (see the contact information on the cover page of this document). The PMRA will consider all comments received before making a final decision on the proposed MRLs. Comments received will be addressed in a separate document linked to this PMRL. The established MRLs will be legally in effect as of the date that they are entered into the Maximum Residue Limit Database.

Appendix I

Summary of Field Trial Data Used to Support the Proposed Maximum Residue Limits

Residue data from field trials conducted in Canada were submitted to support the domestic use of Centurion EC Herbicide and Select EC Herbicide on carrot, radish, parsnip and garden beet. Clethodim was applied to carrots and radishes at the proposed rate, and crops were harvested according to the proposed label directions.

Maximum Residue Limits

The recommendation for maximum residue limits (MRLs) for clethodim was based upon the submitted field trial data, and the guidance provided in the OECD MRL Calculator. Table A1 summarizes the residue data used to calculate the proposed MRLs for carrots and radishes. As carrots and radishes are the representative crops for the Root vegetable (except sugarbeet) subgroup (Crop Subgroup 1B), MRLs are also being proposed for all crops in this subgroup, including parsnip and garden beet.

Table A1 Summary of Field Trial and Processing Data Used to Support MRLs

Commodity	Application Method/ Total Application Rate (g a.i./ha)[1]	Preharvest Interval (days)	Minimum Residues (ppm)	Maximum Residues (ppm)
Carrot roots	Foliar application/ 87.6-97.9	28-30	<0.19	<0.20
Radish roots	Foliar application/ 92.2-95.0	29	<0.09	<0.09
Radish tops	Foliar application/ 92.2-95.0	29	<0.09	<0.09

[1] a.i. = active ingredient

Based on the dietary burden and residue data, MRLs of 0.2 ppm in eggs, meat and meat byproducts of cattle, goats, hogs, horses, poultry and sheep and 0.05 ppm in milk to cover residues of clethodim are also proposed.

Following the review of all available data, MRLs as proposed in Table 1 are recommended to cover residues of clethodim. Residues of clethodim in these crop/livestock commodities at the proposed MRLs will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.